

8.0 COST-SAVING PROCESSES, PROCEDURES, AND TOOLS

In conducting Flood Map Modernization, cost-effectiveness means that more studies can be performed, a higher level of quality can be achieved, and more Digital Flood Insurance Rate Maps (DFIRMs) can be produced. Therefore, FEMA is making enhanced procedures, processes, and tools available to increase the efficiency of contractors and partners. Savings resulting from the enhancements to the study processes, as well as innovative uses of technology such as publication of Base Flood Elevations (BFEs) and review and processing of Letters of Map Change (LOMCs), can be used to create additional mapping products.

FEMA is making enhanced procedures, processes, and tools available to increase the efficiency of contractors and partners.

One of the major cost efficiencies of which FEMA is taking advantage is the move to a digital environment. Digital maps also provide additional benefits. They are easier to use and maintain, and less expensive to update than manually produced cartographic maps. They also afford a uniform structure for digital flood data for the nation, support multi-hazard mapping activities, and provide greater utility for local planning and hazard analyses.

The following sub-section presents FEMA's progress and accomplishments to date.

8.1 Developments in Cost-Saving Processes, Procedures, and Tools Through Spring 2005

8.1.1 Digital Study/Mapping Process Tools

FEMA's Mapping Information Platform (MIP) provides stakeholders with a state-of-the-art geospatial infrastructure to enable flood hazard mapping. The MIP will provide access to powerful engineering, mapping, and management tools. The system will enable multiple participants to use and contribute data.

In January 2005, FEMA made available through the MIP the following WISE modules: Scoping, Terrain, Hydrology, Hydraulics and Open Inventory. These engineering tools are available at no charge to FEMA's mapping partners. To use the WISE modules, users must be performing work for FEMA and must have received appropriate training.

In April 2005, FEMA released the DFIRM tools through the MIP. This is the first time that FEMA has offered a comprehensive online environment for DFIRM production, and is a significant accomplishment for Flood Map Modernization. This time-saving, user-friendly suite of tools guides users through all the steps required to make preliminary DFIRM panels and the Flood

Insurance Rate Map (FIRM) index according to FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*.

The DFIRM production environment provides job management and tracking, DFIRM database creation and editing, workmap generation, visual and automated quality control, batch and manual map annotation tools, automated FIRM panel generation, and automated FIRM index generation. The DFIRM tools save hours of labor per map panel.

Future MIP enhancements will include the ability to automatically export the DFIRM database and FIRM panel raster deliverables to the MIP, completing the DFIRM production life cycle through the post-preliminary process.

More information on DFIRM tools can be found at www.hazards.fema.gov.

8.1.2 BFEs on the Web

As part of the due-process performed for each new map, FEMA is required to provide public notice of proposed and final changes to BFEs. Currently, newspaper notices describe the proposed changes and list existing and modified BFEs for each community. Because these notices can be lengthy—often two letter-size pages or more, depending on the number of flooding sources affected—FEMA incurs a significant cost each year to publish the notices in local newspapers and the Federal Register. To make BFE notices more cost-effective and available to a broader stakeholder audience, FEMA will begin publishing BFE notices on its Flood Hazard Mapping Web site; this will significantly reduce the cost associated with publishing full notices in newspapers.

FEMA is finalizing a plan for transitioning from placing BFE notices in newspapers to publishing them on the Web. FEMA intends to insert a standard notice in local newspapers directing interested persons to FEMA's Flood Hazard Mapping Web site, where the proposed BFE changes can be found.

8.1.3 Tools for Map Amendments

FEMA plans to release eLOMA, a tool for amending maps, in a future MIP release. eLOMA is an application that will provide licensed land surveyors and professional engineers with an Internet-based system to process certain types of Letters of Map Amendment (LOMAs) requests online. This system will be available only to licensed professionals that are registered users of the MIP. It will be designed to allow the user to enter property-specific data by answering a series of questions necessary for a determination. This application will provide an expedited determination that can be printed out on the user's local printer.

Cost-Saving Processes, Procedures, and Tools

This application will play a key role in lowering LOMA processing costs. Future revisions to the eLOMA tool may support the expansion of use to the general public, as well as providing all the necessary validation checks to ensure that an accurate determination has been prepared.

8.1.4 Digital Maps as Effective Maps

FEMA, stakeholders at all levels (local, State, and Federal), and other map users can benefit when digital geospatial flood hazard data becomes an authoritative source of floodplain information for NFIP purposes. At the Federal level, Congress has given the digital geospatial flood hazard data the same legal standing as paper maps. FEMA will clarify its policies and the NFIP regulations to allow the use of GIS flood data as the authoritative, effective flood hazard data.

This change will not affect communities' ability to adopt and use paper maps. It will, however, allow them to take advantage of GIS technologies, where possible. It is expected that, as technology improves and more stakeholders implement digital version of the maps in their day to day processes, the demand for paper copies will lessen. This would significantly decrease program costs and make more program resources available for creation of flood hazard data and mapping.

8.2 Elimination of Composite Negatives

FEMA determined that the printed paper copies of the Flood Insurance Study (FIS) report can be produced economically from the digital (PDF) version of the FIS report that is provided to the Mapping Service Center. FEMA is actively working to reduce the need for photographic negatives.